

Proposal from Young-Kee and Erik

1. Work with Mel and Matt on understanding background shape and alternative methods of extracting signal.
 - Help generating background MC.
 - Any data sample we can use to understand background?
2. Work on b-jet energy corrections—under the aegis of both $Z \rightarrow b\bar{b}$ and top groups.
 - b-specific corrections.
 - Correct jets with soft (e,mu) \rightarrow neutrino.

YKK&E Prop. Cont.

3. Systematic studies (from ground up) of energy flow, EM fraction, multiplicity, etc. in b-jets vs. light quark, gluon jets.
 - Inspired by Tommaso's study on data.
 - Have detailed studies been done before, by us or others?
4. Continue contribution to b-tagging, ntupling.

Fraction of energy in charged particles for different cone sizes and jet types.

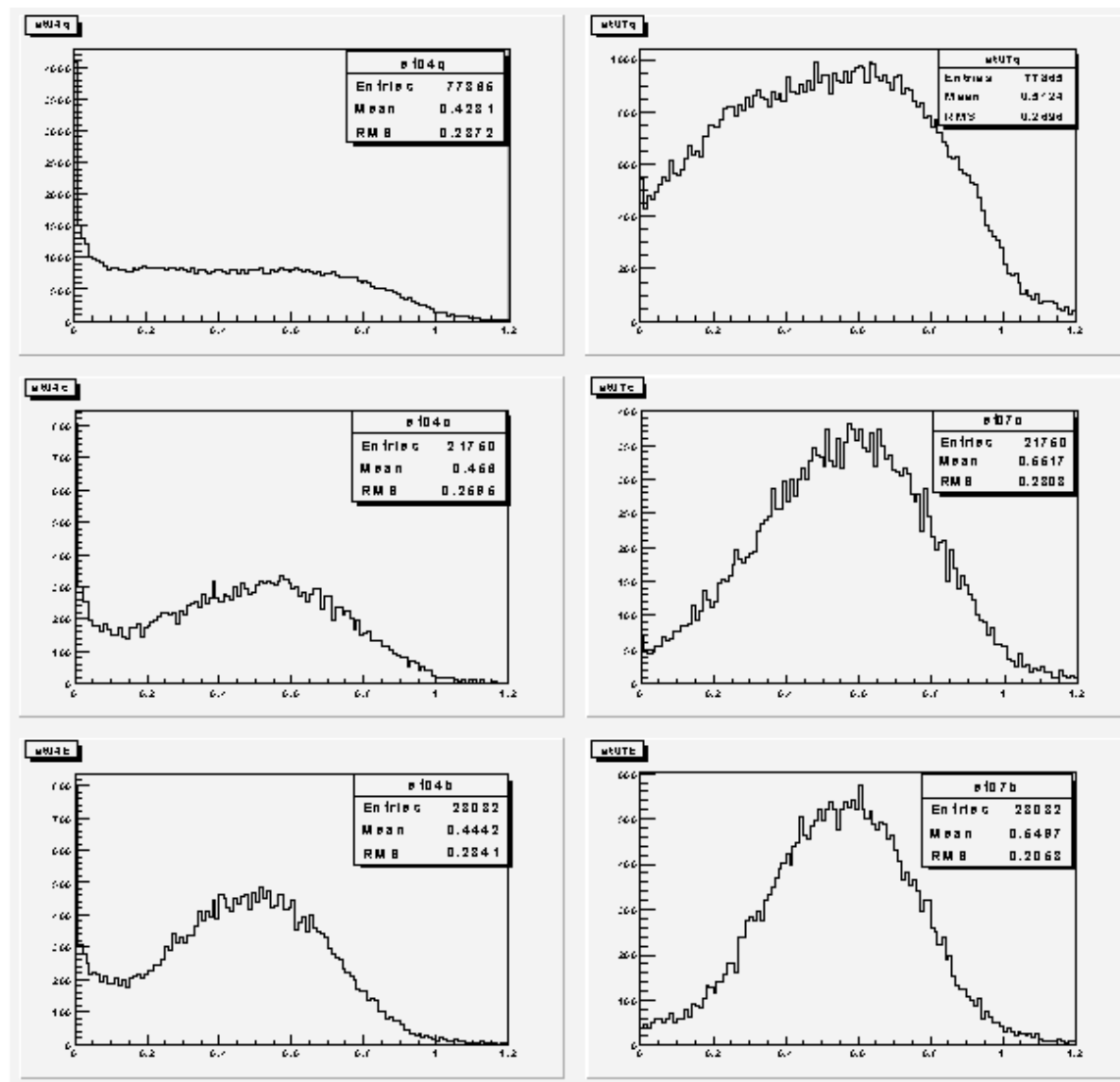


Figure 3: $\Sigma_i P_T^i / E_T^{quark}$ where P_T^i is P_T of i -th charged particle within a cone of 0.4 (left) and 0.7 (right). Top, middle and bottom figures represent $Z \rightarrow u\bar{u}$, $d\bar{d}$, $s\bar{s}$, $Z \rightarrow c\bar{c}$, and $Z \rightarrow b\bar{b}$, respectively.

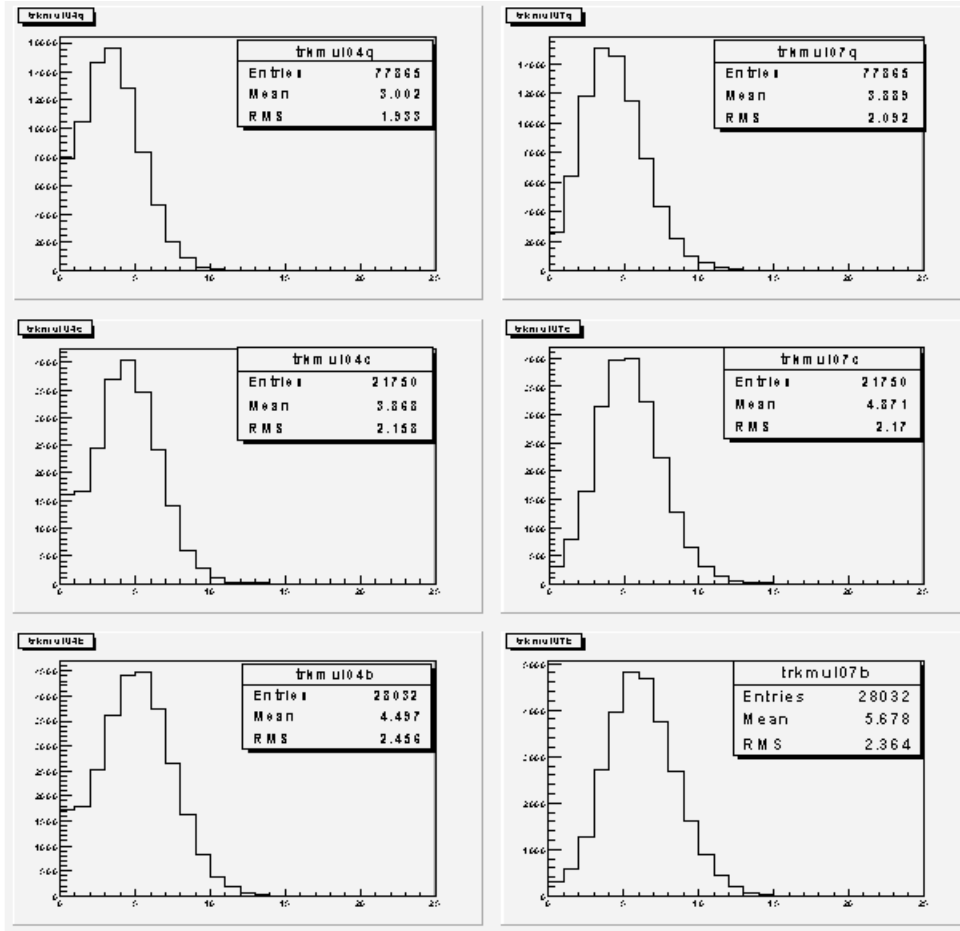


Figure 5: Number of tracks with $P_T > 1$ GeV within a cone of 0.4 (left) and 0.7 (right). Top, middle and bottom figures represent $Z \rightarrow u\bar{u}$, $d\bar{d}$, $s\bar{s}$, $Z \rightarrow c\bar{c}$, and $Z \rightarrow b\bar{b}$, respectively.

Track multiplicity as a function of cone size and jet type.

